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## **CLAIMS**

1. A compound of the general formula A—C  $\mid$  B

wherein

A is an amino acid having at least one functional group in the side chain,

B is a chemical compound covalently bound to at least one functional group

of the side chain of A, chosen from the group consisting of:

- (a) oligopeptides having a chain length of up to 20 amino acids, except for homopolymers of glycine consisting of up to 6 glycine monomers, and
- (b) polyethylene glycols having molar masses of up to 20 000 g/mol; and

C is a group amide-bonded to A chosen from the group consisting of thiazolidine, pyrrolidine, cyanopyrrolidine, hydroxyproline, dehydroproline and piperidine.

- 25 2. The compound according to claim 1, wherein A is an  $\alpha$ -amino acid.
  - 3. The compound according to claim 2, wherein A is a natural  $\alpha$ -amino acid.
- 4. The compound according to claim 1, wherein the amino acid is chosen from the group consisting of threonine, tyrosine, serine, arginine, lysine, aspartic acid, glutamic acid and cysteine.
  - 5. The compound according to claim 1, wherein the oligopeptides have chain lengths of from 3 to 15 amino acids.
  - 6. The compound according to claim 1, wherein the oligopeptides are chosen from the group consisting of homopolymers, copolymers or block copolymers.

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- 7. The compound according to claim 1, wherein the polyethylene glycols have molar masses of at least 250 g/mol.
- 8. The compound according to claim 1, wherein C is a group chosen from the group consisting of thiazolidine, pyrrolidine and cyanopyrrolidine.
  - 9. A pharmaceutical composition comprising the compound according to claim 1, optionally in combination with pharmaceutically acceptable carriers or adjuvants.

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- 10. A cosmetic composition comprising the compound according to claim 1, optionally in combination with cosmetically acceptable carriers or adjuvants.
- 11. A method for topically influencing the activity of dipeptidyl peptidase IV or of analogous enzymes in a subject, comprising administering a therapeutically effective amount of at least one compound or pharmaceutical or cosmetic composition according to claim 1 to said subject.
- 12. A method for prophylaxis or therapy of diseases of the skin or mucosa,
   25 autoimmune diseases and inflammation in a subject, comprising administering a therapeutically effective amount of at least one compound or pharmaceutical or cosmetic composition according to claim 1 to said subject.
- 13. A method for prophylaxis or therapy of inflammation, psoriasis, allergies,
  30 arthritis, tumors or autoimmune diseases in a subject comprising the administration
  of a therapeutically effective amount of at least one compound or pharmaceutical or
  cosmetic composition according to claim 1 to said subject.
- 14. A pharmaceutical composition comprising at least one compound of the general formula A—C

## 5 wherein

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A is an amino acid having at least one functional group in the side chain,

B is a chemical compound covalently bound to at least one functional group
in the side chain of A, chosen from the group consisting of:

- (a) oligopeptides having a chain length of up to 20 amino acids,
- (b) polyethylene glycols having molar masses of up to 20,000 g/mol,
- (c) optionally substituted organic amines, amides, alcohols, acids or aromatic compounds having from 8 to 50 carbon atoms,

C is a group, amide-bonded to A, chosen from the group consisting of thiazolidine, pyrrolidine, cyanopyrrolidine, hydroxyproline, dehydroproline and piperidine,

and at least one pharmaceutically acceptable adjuvant appropriate for the site of action.

- 15. The pharmaceutical composition according to claim 14, wherein A is an  $\alpha$ 20 amino acid.
  - 16. The pharmaceutical composition according to claim 15, wherein A is a natural  $\alpha$ -amino acid.
- 25 17. The pharmaceutical composition according to claim 16, wherein the amino acid is chosen from the group consisting of threonine, tyrosine, serine, arginine, lysine, aspartic acid, glutamic acid and cysteine.
- 18. The pharmaceutical composition according to claim 14, wherein the oligopeptides have chain lengths of from 3 to 15 amino acids.
  - 19. The pharmaceutical composition according to claim 14, wherein the oligopeptides are chosen from the group consisting of homopolymers, copolymers and block copolymers.

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- 5 20. The pharmaceutical composition according to claim 14, wherein the polyethylene glycols have molar masses of at least 250 g/mol.
  - 21. The pharmaceutical composition according to claims 14 to 21, wherein C is a group chosen from the group consisting of thiazolidine, pyrrolidine and cyanopyrrolidine.
  - 22. The pharmaceutical composition according to claim 14, further comprising pharmaceutically acceptable carriers.
- 15 23. A method for topically influencing the activity of dipeptidyl peptidase IV or of analogous enzymes in a subject comprising administering to said subject a therapeutically effective amount of a pharmaceutical composition according to claim 14.
- 24. A Method for prophylaxis or therapy of diseases of the skin or mucosa, autoimmune diseases and inflammation in a subject comprising administering to said subject a therapeutically effective amount of a pharmaceutical composition according to claim 14.
- 25. A method for prophylaxis or therapy of inflammation, psoriasis, periodontitis, allergies, arthritis, tumors or autoimmune diseases in a subject comprising administering to said subject a therapeutically effective amount of a pharmaceutical composition according to claim 14.